

REMARKS

Claims 10-14 and 16-20 were rejected as allegedly being obvious over O'Neill et al. (US 6,124,092). Claim 15 was rejected as allegedly being obvious over O'Neill et al. (US 6,124,092) in view of Hellyer et al. (US 6,207,818). The rejections are respectfully traversed.

Claim 10 reads as follows:

-- A method for isolating one or more different-sequence polynucleotides from a mixture, the method comprising:

(a) flowing the mixture through a flow path containing a plurality of solid supports which are located in series in the flow path, each support having bound thereto a sequence-specific capture agent complementary to a different-sequence polynucleotide, under conditions effective to specifically bind different-sequence polynucleotides to corresponding sequence-specific capture agents on one or more of the supports,

(b) after said specific binding, releasing bound polynucleotides from a selected support by altering a physical property of that support while leaving unaltered the same physical property of at least one other of the supports,

(c) eluting the released polynucleotides through the flow path such that the eluted polynucleotides can be isolated in separated form.--

The Examiner has alleged that one of ordinary skill in the art would have been motivated to modify the method of O'Neill et al. to arrive at the present invention. The Examiner has further alleged that the basis of this conclusion is in the teaching by O'Neill et al. of capillary channels (col. 4, lines 48-49), which the Examiner equates to a "flow path", and that solid supports, such as beads, are also disclosed.

However, to establish a case of *prima facie* obviousness, all claim limitations must be taught or suggested by the cited reference(s).

In the present case, O'Neill et al. does not teach or suggest the arrangement of "a plurality of solid supports in series in a flow path, each support having bound thereto a sequence-specific capture agent complementary to a different sequence polynucleotide".

O'Neill et al. only suggests the use of capillary channels for the separation of polynucleotides in an array, as shown in Figure 4. Furthermore, as defined at column 21, lines 32-56, "each input port [of the array of capillary channels] has a different recovery tag binding

compound" attached to it. In other words, only one recovery tag (i.e.- sequence-specific capture agent) per capillary channel (i.e.- flow path) is taught or suggested. In addition, nowhere does O'Neill et al. teach or suggest the arrangement of a plurality of solid supports in series in a single capillary channel (i.e.- flow path). Therefore, O'Neill et al. fails to teach all elements of the present claims. As a result, no reasonable argument for *prima facie* obviousness can be put forth.

Accordingly, withdrawal of the rejection of claims 10-14 and 16-20 under 35 U.S.C. 103(a) is respectfully requested.

In addition, even if a reference that makes up for the deficiencies of O'Neill et al. were to exist, the motivation to combine the teachings of that reference with O'Neill would invariably have to come directly from that reference, since O'Neill provides absolutely no basis for doing so.

In addition, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious (MPEP 2143.03). Therefore, the rejection of claim 15 is moot.

The applicants submit that the application is in condition for allowance. Early notice of allowance is requested.

FEE AUTHORIZATION and REQUEST FOR TIME EXTENSION

A Petition for a 3-Month Extension of Time is enclosed herewith. If any additional time extensions are required, such time extensions are hereby requested. If any additional fees not submitted with this response are required, please take such fees from Applied Biosystems Deposit Account No. **01-2213 (Order No. 4470 US)**.

Respectfully submitted,

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